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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/538,339	03/29/2000	KATSUYUKI NANBA	15162/01750	6182

24367 7590 11/03/2003

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EXAMINER

AMINI, JAVID A

ART UNIT

PAPER NUMBER

2672

DATE MAILED: 11/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/538,339	NANBA ET AL.
	Examiner	Art Unit
	Javid A Amini	2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-14 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some *
 - c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

Response to Arguments

Applicant's arguments filed April 30, 2003 have been fully considered but they are not persuasive.

- Response to remarks on page 13, lines 12-15: Applicant discloses that the reference (Song) does not disclose or suggest "a second driving section which drives the reading of information" nor "a control section which inhibits the second driving section from driving the storage medium while the first driving section performs a reset operation of the display section". Examiner's reply: Applicant uses broad claim language, for example: last paragraph in claim 1, "a control section which inhibits the second driving section from driving the storage medium while the first driving section performs a reset operation of the display section". [The common knowledge for a person skilled in the art can be Hyper-Threading Technology. HT Technology brings increased performance to computer users in two ways: using multithreaded software or using software in a multitasking environment. Software applications that have been written to use multiple pieces of code called "threads" view a processor at high GHz with HT Technology as two processors. HT Technology allows the processor to work on two separate threads at the same time rather than one at a time. In addition, applications can benefit in a multitasking environment - operating two or more different software programs at the same time - when run under operating systems such as Windows*XP or Linux*. Both ways add up to extra performance and less waiting for the computer user.] Song in Fig. 3, illustrates first and second power (14 and 15), and control signal. The control signal, which controls the second driving section from driving the (storage medium, HD, or any other media) while

the first power, performs a reset operation. However, when considering what is taught in Kuno in view of the teachings found in Song, it becomes obvious to one skilled in the art at the time of the invention to combine them. The Song reference discloses a control section (Figure 3) that inhibits the second driving section (Item 15) from driving a storage medium while the first driving section (Item 14) performs a reset operation of the display section (Item 34). It should be understood that the items denoted on Figure 3 as the "first power enable signal" and "second power enable signal" (Items 14 & 15, respectively) may, be applied so as to enable operations such as: driving a storage medium, driving a display section or for resetting purposes. It should also be noted that a power sequence controller (Item 11) generates a control enable signal, which is an input to the display section (Item 34). Via its circuitry, the signal provides a means for controlling the display section (Item 34), which is responsive to an incoming display signal, a write control signal and/or a reset signal. The power sequence controller (Item 11), when designated as a display control unit, can discriminate between the reset signal generated when the display system is booted and the reset signal generated when the display system is operating via a feedback path.

- Response to remarks on page 13, lines 17-20: Applicant argues that neither Kuno nor Song disclose or suggest "a control section which inhibits the second driving section from driving the storage medium while the first driving section performs a reset operation of the display section", claim 1 is not obvious over Kuno or Song, either singly or in combination. Examiner's reply: In contrast Song and Kuno in Figs. 3 and 11 illustrate respectively.

- Response to remarks on page 14, lines 4-6: Applicant argues that Kuno does not disclose or suggest "a control section which inhibits the at least one other device from being operated when the display section writes information on the liquid crystal". Examiner's reply: Kuno in Fig. 11 illustrate an external memory.
- Response to remarks on page 14, lines 21-23: Examiner's reply: Applicant argues that neither Kuno nor Song disclose or suggest inhibiting operation of a peripheral device during writing of information on the liquid crystal display. Examiner's reply: Kuno in Fig. 11 discloses that peripheral device (item 31) which records a large number of documents and dynamic images can be connected for the purpose of viewing these documents and dynamic images on this display device. (also see page 5, lines 30-39).
- Response to remarks on page 15, lines 19—21: Applicant argues that Kuno does not disclose "the claimed feature of a 'control section which inhibits the sound reproducing section from reproducing sound when the selecting section selects the mode'". Song also does not disclose or suggest "the claimed feature of a 'control section which inhibits the sound reproducing section from reproducing sound when the selecting section selects the mode'". Koichi does not disclose or suggest "the claimed feature of a 'control section which inhibits the sound reproducing section from reproducing sound when the selecting section selects the mode'". Examiner's reply: Koichi in Fig. 1, illustrates a sound reproducing selection, which reproduces sound in accordance with information displayed.
- Response to remarks on page 16, lines 28-29: Applicant argues that Kuno fails to disclose the claimed feature of 'receiving a command to write information on the liquid crystal display at a specified speed. Examiner's reply: Kuno does not explicitly specify,

“receiving a command to write information on the liquid crystal display at a specified speed”, but Kuno in Fig. 11 illustrates a setup of obviousness for example: a display with internal/external processors that communicates with a particular speed. Also Applicant fails to specify the range of speed in claim 9. Applicant uses a broad claim language “specified speed”. Applicant on page 17 of remarks lines 1-2, argues that neither Song nor Koichi or suggest, “receiving a command to write information on the display at a specified speed”, and inhibiting the reproduction of sound in response to the command. Examiner’s reply: when considering what is taught in Kuno in view of the teachings found in Koichi, it becomes obvious to one skilled in the art at the time of the invention to combine them. The Koichi reference (Figure 1) discloses a sound reproducing section (i.e.- loudspeaker, Item 61), which reproduces sound in accordance with information displayed on the display section. The speech synthesis processing section (Item 59) outputs signals, such as page turning-over sound which was connected with the loudspeaker (Item 61) and synthesized voice based on the control command from a control unit (Item 30), to a loudspeaker (Item 61), see Page 5, Lines 3039 for translation.

List of claims:

1. An information display device comprising: a display section which displays information stored in a storage medium; a first driving section which drives the display section to write information thereon; a second driving section which drives the storage medium to read information from the storage medium; a power source section which supplies electric power to the first and second driving sections; and a control section which inhibits the second driving section from driving the storage medium while the first driving section performs a reset operation of the display section.
2. An information display device according to claim 1, wherein the display section uses liquid crystal with a memory effect which is capable of displaying information thereon when the power source is not supplying electric power.
3. The information display device according to claim 2, wherein the liquid crystal is capable of making a color display.

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4. An information display device according to claim 1, wherein the power source section supplies electric power from a battery.
5. A method for displaying information stored in a storage medium on a liquid crystal display, said method comprising the steps of: reading information from the storage medium and displaying the information on the liquid crystal display; resetting the liquid crystal display in response to a command of writing on the liquid crystal display; and inhibiting the reading of information from the storage medium during the reset of the liquid crystal display.
6. An information display device comprising: a display section which uses liquid crystal and displays information stored in a storage medium; a sound reproducing section which reproduces sound in accordance with information displayed on the display section; a power source section which supplies electric power to the display section and the sound reproducing section; a selecting section which selects a mode to perform writing of information on the display section at a specified speed; and a control section which inhibits the sound reproducing section from reproducing sound when the selecting section selects the mode.
7. An information display device according to claim 6, wherein the liquid crystal is capable of making a color display.
8. An information display device according to claim 6, wherein the control section further permits the sound reproducing section to reproduce sound when the mode is cancelled.
9. A method for displaying information stored in a storage medium on a liquid crystal display, said method comprising the steps of: reading information from the storage medium and displaying the information on the liquid crystal display; reproducing sound in accordance with information displayed on the display section; receiving a command to write information on the liquid crystal display at a specified speed; and inhibiting the reproduction of sound in response to the command.
10. An information display device comprising: a display section which writes information on a liquid crystal; at least one other device connected to the image information display device; and a control section which inhibits the at least one other device from being operated when the display section writes information on the liquid crystal.
11. An information display device according to claim 10, wherein the at least one other device is a storage medium driver incorporated in the information display device.
12. An information display device according to claim 10, further comprising: a first driving section which drives the display section to write information on the liquid crystal; a second driving section which drives the other device connected to the image information display device; and a power source section which supplies electric power to the first and second driving sections; wherein said control section inhibits the second driving section from driving the other device when the first driving section drives the display section.
13. A method for displaying information on a liquid crystal display, at least one peripheral device connected to said liquid crystal display, said method comprising the steps of: writing information on the liquid crystal display; and inhibiting the operation of the peripheral device during the writing of information on the liquid crystal display.
14. A method as claimed in claim 13, wherein the at least one peripheral device is a storage medium driver.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-5 and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshinori Kuno, et. al., U.S. Patent 5,467,102 (hereinafter, referred to as "Kuno") in view of Yoon Seok Song, et. al., U.S. Patent 5,777,611 (hereinafter, referred to as "Song").

Regarding Claim 1 and amended Claim 2, Kuno discloses an information display device (Figures 1, 3 and 11) comprising a display section (Fig. 1, Item 100) which displays information stored in a storage medium (Fig. 3, Item 14a); a first driving section (Fig. 3, Item 13a) which drives the display section to write information thereon; a second driving section (Fig. 3, Item 13b) which drives the storage medium to read information from the storage medium; a power source section (Fig. 11, Item 30) which supplies electric power to the first and second driving sections.

The Kuno reference discloses most of the features of the presently claimed information display device, but lacks full disclosure of a "control section, which inhibits the second driving section from driving the storage medium while the first driving section performs a reset operation of the display section." However, when considering what is taught in Kuno in view of the teachings found in Song, it becomes obvious to one skilled in the art at the time of the invention to combine them. The Song reference discloses a control section (Figure 3) that

inhibits the second driving section (Item 15) from driving a storage medium while the first driving section (Item 14) performs a reset operation of the display section (Item 34). It should be understood that the items denoted on Figure 3 as the "first power enable signal" and "second power enable signal" (Items 14 & 15, respectively) may, be applied so as to enable operations such as: driving a storage medium, driving a display section or for resetting purposes. It should also be noted that a power sequence controller (Item 11) generates a control enable signal, which is an input to the display section (Item 34). Via its circuitry, the signal provides a means for controlling the display section (Item 34), which is responsive to an incoming display signal, a write control signal and/or a reset signal.

The power sequence controller (Item 11), when designated as a display control unit, can discriminate between the reset signal generated when the display system is booted and the reset signal generated when the display system is operating via a feedback path. In sum, when the power sequence of the system receives a reset signal from the circuitry, it disables (i.e., inhibits) the second enable signal, thereby discontinuing its original function (e.g., drive a storage medium), while maintaining the first enable signal, which allows its original function to continue (e.g., drive or reset a display section), see Column I. Lines 50-67 and Column 2. Lines 47-57.

Not only would it have been obvious to the person of ordinary skill in the art at the time the invention was made to combine these references, but also the motivation to combine and/or modify these references is apparent when considering the reasons to follow. The summary of the invention section of the disclosure (Page 2, Lines 16-23), states that one object of the present invention is to provide for an information display device and method that is "capable of preventing a driving voltage from dropping (e.g., during a reset/boot sequence), which avoids

unstability of operation" (emphasis added). Additionally, it is stated that one object of the present invention is to provide for an information display device and method that does not degrade the "performance of the system in a rapid display mode." The Song reference discloses a method of providing an LCD control unit that is capable of discriminating between a reset function of a LCD system (e.g., reset/reboot sequence) and when the LCD system is performing other operations within the system so that the display system does not become "unstable" during its regular operation. In addition, the Song reference states that "it is imperative that the power sequence controller (control unit) is used the LCD system" because the LCD module can be damaged if hardware reset is generated when power is applied to the LCD module.

Since the Kuno reference discloses a display device in which uses such an LCD system as disclosed in the Song reference, their combination become obvious to one with ordinary skill in the art at the time of the invention. Their combination also carries a reasonable expectation of success to one with ordinary skill in the art because the feature as disclosed in Song, which is directly applicable to apply to LCD systems as described in Kuno, would be successful in preventing an "unstability of operation" and "degradation of performance in a rapid display mode," as stated as an objective stated in the summary of the invention of this case.

As per Claims 3 and 4, the Kuno reference explicitly recites (1) an information display device that is capable of making a color display (Column 12, lines 15-18) and also (2) a power source section, which supplies electric power from a battery (Figure 11, Item 30).

Regarding amended Claim 5, Kuno discloses a method for displaying information (Figures 1, 3 and 11) comprising a display section (Fig. 1. Item 100) stored in a medium (Fig. 3, Item 14a) on a liquid crystal display (Col. 12, Lines 10-11) comprising the steps of: reading

information (Fig. 3, Item 13a) from the storage medium (Fig. 3, Item 14) displaying the information on the liquid crystal display (Col. 12, Lines 10-11); presenting the liquid crystal display in response to a command of writing on the liquid crystal (Fig. 1, Item 100 and Column 12, Lines 15-18). The Song reference discloses a method in which the control section (Figure 3) inhibits the reading of information from the storage medium during the reset (Fig. 3, Item 34) of the liquid crystal display. Method Claim 5 is noted to recite features equivalent to and performing the same function as in Claim 1, and is, therefore, subject to rejections for the same rationales.

2. With exception to Claims 11 and 14 (which contain additional limitations), added Claims 10-14 recite substantially the same limitations as addressed with respect to Claims 1-5 above, and the same remarks apply.

Claim 11 recites said "at least one other device" as described in claim 10 to exist as a "storage medium driver incorporated in the information display device." Kuno discloses a storage medium (Figure 3, Item 14a) that is incorporated into its display section (Fig. 1, Item 100). One embodiment of the display device in Kuno supports the notion of incorporating a storage medium into the display section so that the entire display device can "be folded up completely, face to face with each other, such that the display device can be carried in hands easily while protecting the display screens" (Column 3, Lines 54-57).

Examiner assumes that the language of Claim 14 was intended to reflect dependency from Claim 13 rather than from itself (as improperly stated in the amended claim). Claim 14 recites a method for displaying information on a liquid crystal display, wherein the at least one peripheral device is a storage medium driver. With reference to Kuno (Figure 11) it is disclosed that peripheral

device (e.g., an external memory, Item 31) such as an optical disk device which records a large number of documents and dynamic images can be connected for the purpose of viewing these documents and dynamic images on this display device (Column 9, Lines 12-IS).

3. Amended Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuno in view of Song as applied to claims 1-5 above, and further in view of Koichi. As for Claim 6, Kuno reference discloses an information display device (Figures 1, 3 and 11) comprising a display section (Fig. 1, Item 100) which uses liquid crystal (Col. 12, Lines 10-11) and displays information stored in a storage medium (Fig. 3, Items 14 and 14a); a power source section (Fig. 11, Item 30); a selecting section which selects a mode to perform writing of information on the display section at the specified speed (see Fig. 3, Item 13a and discussion infra).

Kuno discloses most of the features of the claimed method for displaying information stored in a storage medium on a liquid crystal display as recited in Claim 6-8, except for the claimed feature of a "control section which inhibits the sound reproducing section from reproducing sound when the selecting section selects the mode" (Claim 6) and/or "when the mode is canceled" (Claim 7). However, when considering what is taught in Kuno in view of the teachings found in Song, as explained in the rejections of Claims 1-5 above, it becomes obvious to one skilled in the art at the time of the invention to combine. More specifically, Sung teaches a method of inhibiting a driving section (e.g., "a first" or "a second" driving section as claimed herein) from driving another component (e.g., a storage medium as claimed herein). In another embodiment, this method taught in Song is applicable in a design that inhibits the driving of a

different component, such as a sound reproducing section, from reproducing sound while the controller is directed to either: (a) perform a different task or (b) discontinue any task(s) the controller was presently performing.

The Kuno reference also fails to disclose the claimed feature of a "sound reproducing section which reproduces sound in accordance with information displayed on the display section." However, when considering what is taught in Kuno in view of the teachings found in Koichi, it becomes obvious to one skilled in the art at the time of the invention to combine them. The Koichi reference (Figure 1) discloses a sound reproducing section (i.e.- loudspeaker, Item 61), which reproduces sound in accordance with information displayed on the display section. The speech synthesis processing section (Item 59) outputs signals, such as page turning-over sound which was connected with the loudspeaker (Item 61) and synthesized voice based on the control command from a control unit (Item 30), to a loudspeaker (Item 61), see Page 5, Lines 30-39 for translation.

Not only would it have been obvious to the person of ordinary skill in the art at the time the invention was made to combine these references, but also the motivation to combine and/or modify these references is apparent when considering the reasons to follow. The Koichi reference discloses a method of using a loudspeaker to communicate with the user of the display device via a synthesized voice based on the control command from a control unit. The Kuno reference discloses a method of operating buttons in which controls the sped of moving the pages according to the strength at which these buttons are pressed. If a noise via a loudspeaker as recited in Koichi was combined with the display system in Kuno, then the user could listen for a noise, beep, voice, etc, when operating the system, which notifies the user when and/or how

many pages has been indeed using the display device. Such a combination would have been obvious when performance of the display system in a rapid display mode is the objective.

Regarding amended Claims 7 and 9, the statements presented with respect to Kuno and Song are incorporated herein. More specifically, the Kuno reference fails to disclose the claimed feature of "receiving a command to write information on the liquid crystal display at a specified speed." However, when considering what is taught in Kuno in view of the teachings found in Song, it becomes obvious to one skilled in the art at the time of the invention to combine them as explained in the rejections of Claims 1-5, above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A Amini whose telephone number is 703-605-4248. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

Javid A Amini
Examiner
Art Unit 2672

Javid Amini


JEFFERY BRIER
PRIMARY EXAMINER